SUPERCONDUCTIVITY IN 2-2-3 $Y_2Ba_2Cu_3O_{8+\delta}$

H.H. Joshi, G.J. Baldha, R.B. Jotania, S.M. Joshi,
H. Mohan, P.B. Pandya, H.N. Pandya, and R.G. Kulkarni
Department of Physics
Saurashtra University
Rajkot, 360 005, INDIA

ABSTRACT

We have synthesized a new high Tc 2-2-3 superconductor $Y_2Ba_2Cu_3O_{8+\delta}$ by a special preparation technique and have characterized it by ac-susceptibility measurements. Diamagnetism and Meissner effect sets in at low fields and superconducting transition onsets at 90 K. The systematic investigation of the real and imaginary components of ac-susceptibility as a function of temperature and applied ac magnetic field reveals that the magnetic behaviour is that of a granular type superconductor.